



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

[Handwritten Signature]

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,707	09/18/2003	Michael R. Krause	200311239-1	6814
22879	7590	04/23/2007	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			WILSER, MICHAEL P	
			ART UNIT	PAPER NUMBER
			2109	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/23/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/664,707	KRAUSE ET AL.	
	Examiner	Art Unit	
	Michael Wilser	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 18 September 2003.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 18 September 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/18/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

1. This action is in response to the original filing of September 18, 2003. Claims 1-21 are pending and have been considered below.

Information Disclosure Statement

2. The information disclosure statement filed on September 18, 2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. A copy of the EPO patent listed on the IDS was not supplied to the office. It has been placed in the application file, but the information referred to therein has not been considered.

Specification

3. The disclosure is objected to because of the following informalities: the examiner notes the use of acronyms (e.g. CPU, RDMA, etc.) throughout the specification without first including a description in plain text, as required.

4. In the specification on page 15, line 22 and continued onto page 16, line 1 the applicant defines the acronym "CQE" to be a "completion queue element". The applicant then later proceeds to define the same acronym "CQE" as a "completion queue entry" on page 18, line 22. Since both of these acronyms are defined with respect to the same figure it is unclear on whether the completion queue element and completion queue

Art Unit: 2109

entry are two distinct concepts or are one and the same. For purpose of examination the examiner is interpreting this to be two different concepts of the applicants specification. If the two concepts are different the applicant is advised to change one of the acronyms so that they can be easily distinguished by one having ordinary skill in the art.

Appropriate correction is required.

Claim Objections

5. Claims 16 and 18 are objected to because of the following informalities: Claim 16 reads "claim 15, executing" in line 1. The examiner notes that it appears that the claim should have read "claim 15, comprising executing".
6. Claim 18 reads "wherein notification comprising" in line 1. The examiner notes that it appears that the claim should read "wherein the notification comprises".
7. Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2109

9. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kagan et al. (US 2006/0129699).

Claim 1 Kagan discloses an apparatus comprising:

- a. plurality of queue handlers associated with a communication device (page 4, paragraph 41);
- b. queue handler associated with a process (page 4, paragraph 43); and
- c. each queue associated with one of the plurality of queue handlers (page 4, paragraphs 42 & 43).

Claim 8: Kagan discloses a network comprising:

- a. plurality of systems (page 1, paragraph 2);
- b. switch network that connects the systems for communication (page 1, paragraph 4);
- c. communication device having a plurality of queues (page 1, paragraph 4);
- d. handlers associated with the communication device (page 4, paragraph 41);
- e. each handler associated with one of the processes (page 4, paragraph 43);

and

- f. each handler associated with one of the plurality of queues (page 4, paragraphs 42 & 43).

Claim 15: Kagan discloses a method comprising:

- a. creating a plurality of queues on a communication device (page 1, paragraph 4);
- b. plurality of queues associated with one of the queue handlers (page 4, paragraphs 42 & 43);
- c. queue handlers associated with the communication device (page 4, paragraph 41);
- d. queue handlers are associated with a process (page 4, paragraph 43);
- e. placing queue entry on one of the queues (page 2, paragraph 12 & pages 7 & 8, paragraph 90);
- f. invoking one of the queue handlers associated with one of the queues (page 6, paragraph 69); and
- g. notifying one of the processes associated with the queue handler (page 5, paragraphs 70 & 71).

Claims 2 and 16: Kagan discloses an apparatus and method as in Claims 1 and 15 above, and further discloses that the process is associated with a processor (page 3, paragraphs 35 & 38).

Claims 9 and 20: Kagan discloses a network and method as in Claims 8 and 15 above, and further discloses the plurality of queues are associated with queues (page 2, paragraph 24 & pages 7 & 8, paragraph 90).

Claim 10: Kagan discloses a network as in Claim 8 above, and further discloses that wherein one of the handlers is associated with a first process and the another handler is associated with a second process (page 4, paragraph 43).

Claims 3, 11, and 18: Kagan discloses an apparatus, network, and method as in Claims 2, 10, and 15 above, and further discloses that the queue handler generates an interrupt to the processor associated with the process (page 7, paragraphs 83-85).

Claim 4: Kagan discloses an apparatus as in Claim 1 above, and further discloses that a verb (instruction) modifies an association of one of the queues associated with a queue handler (page 6, paragraph 77).

Claim 5: Kagan discloses an apparatus as in Claim 1 above, and further discloses that a verb (instruction) creates a queue associated with a queue handler (page 6, paragraph 77).

Claims 6 and 17: Kagan discloses an apparatus and method as in Claims 1 and 15 above, and further discloses that a verb (instruction) returns a number of queue handlers associated with the communication device (page 6, paragraph 77).

Art Unit: 2109

Claim 7: Kagan discloses an apparatus as in Claim 1 above, and further discloses that each queue handler is associated with a queue through a queue handler identifier (page 6, paragraph 76 & pages 7 & 8 paragraph 90).

Claim 12: Kagan discloses a network as in Claim 10 above, and further discloses that a verb (instruction) modifies the association a handler and a process (page 6, paragraph 77).

Claim 13: Kagan discloses a network as in Claim 8 above, and further discloses that the handlers reside in memory of the communication device (page 4, paragraph 45).

Claim 14: Kagan discloses a network as in Claim 8 above, and further discloses that the handlers reside in memory of a system that is external to the communication device (page 3, paragraph 37).

Claim 19: Kagan discloses a method as in Claim 15 above, and further discloses that issuing a verb (instruction) to create one of the plurality of queues (pages 5 & 6, paragraph 73 & pages 7 & 8, paragraph 90).

Claim 21: Kagan discloses a method as in Claim 15 above, and further discloses that the creation of the queue comprises defining each of the queues in memory (page 3, paragraph 29).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Wilser whose telephone number is (571) 270-1689. The examiner can normally be reached on Mon-Fri 7:30-5:00 EST (Alt Fridays Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre can be reached on (571) 270-1065. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mw
MPW
April 17, 2007

JM
James Myhre
Supervisory Patent Examiner